

BRAINIAC

Teaching parents to talk math with their kids

By **Kevin Hartnett** | GLOBE CORRESPONDENT SEPTEMBER 15, 2016

IN 1989, PEDIATRICIANS at Boston City Hospital started urging parents to read to their kids. That effort, [“Reach Out and Read,”](#) is often credited as the start of the early childhood literacy movement. Indeed, reading bedtime stories is now considered as much a part of a parent’s responsibilities as encouraging teeth-brushing.



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What if we did the same thing with math?

Researchers with a group called the [DREME Network](#) (which stands for Development and Research in Early Math Education) say it’s time for parents to begin to teach their preschool-age children basic math concepts with the same urgency that they encourage reading.

“We’re about 25 years behind in math. I think we can use some of the same strategies [that worked with reading],” says [Deborah Stipek](#), professor of education at Stanford University and head of the DREME Network, which is funded by the [Heising-Simons Foundation](#).

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The benefits of a fast start in math are well established. A [2007 study](#) showed that a child's math knowledge entering kindergarten strongly predicts long-term math achievement. More surprisingly, this study found that early math knowledge predicts later *reading* ability even better than early reading does. This suggests that the cognitive abilities developed in the course of learning math — attention, focus, working memory, problem solving — have big spillover effects.

It's also well documented that many Americans suffer from “math anxiety,” which may lead them to forgo talking about the subject with their kids.

“Parents don't really think about math as something you do at home, they think about it as something you do in school,” says Stipek.

Over the last several years, a number of initiatives have launched which aim to make it easier for parents to talk about math with their kids. These include an app called [Bedtime Math](#) and a [2015 study](#) out of the University of Chicago, which provided parents with iPads loaded with math word problems. Related to this research, the DREME Network began work in 2014 and hopes to show parents of young children how they can engage in math conversations with their kids in a natural way, just like many already do with reading and other topics.

“The world is full of opportunities for parents and children to engage together in joint learning around early math. And yet it also appears that in many families, parents and early childhood caregivers often miss those opportunities,” says [Eric Dearing](#), a psychologist at Boston College and a member of the DREME Network.

The concepts and skills that make a difference with kids ages 3 to 5 (which is where the DREME Network is focused) are so basic that any adult can handle them: counting objects and recognizing that the last number stated describes the total number of objects, talking about patterns, going on “shape hunts,” ordering sets from biggest to smallest.

“People think of math in a very narrow way, but block play, puzzles, spatial aspects of our cognition, these are also important to mathematics. We’re not advocating drilling kids,” says [Susan Levine](#), a psychologist at the University of Chicago and DREME Network member.

The researchers are currently launching several studies to identify natural ways to promote math-talk. Dearing is leading a study that will provide low-income families with food vouchers and recipes that have been annotated with math talking points.

“There will be call-outs for parents and early caregivers to engage in conversations about counting, set size, and measurement,” says Dearing.

“We’re going to compare the types of interactions that occur with parents who receive recipes and vouchers with and without the math tips.”

If lessons from early reading are any indication, it will take a more broad-based shift in parenting culture to embrace math. After all, the stories parents read to their kids each night are already full of potential math lessons — count the trees on a page, compare the number of trees to the number of stars, find three circles on this page of “Goodnight Moon.” But it could take generations — and plenty of reminders at the doctor’s office — to get parents in the habit of actually pointing them out.

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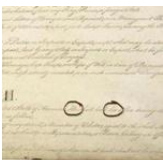
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